DDF annual report

Title of Investigation:

Interactive Career Information Web Resource

Principal Investigator:

Dr. Robert E. Gabrys (Code 130)

Other In-house Members of the Team:

Donald Wolford (Code 120) and Katherine Bender (Code 400)

Other External Collaborators:

June Streckfus, Executive Director, Maryland Business Roundtable for Education

Initiation Year:

FY 2004

Aggregate Amount of Funding Authorized in FY 2004 and Earlier Years:

$25,000

Funding Authorized for FY 2005:

$25,000

Actual or Expected Expenditure of FY 2005 Funding:

In-house: $5,000; Grants: $20,000 (Maryland Business Roundtable for Education) for Web integration and design

Status of Investigation at End of FY 2005:

Completed

Expected Completion Date:

July 2005

Purpose of Investigation:

The purpose of this proposal was threefold: (1) contribute to the development of an innovative and informative NASA career-focused Web resource for 8th- and 9th-grade students in Mary-

land; (2) contribute to the design of a statewide site that attracted first-time and repeat visitors and was integrated with a teen Web site, which the Maryland State Department of Education and the Maryland Business Roundtable for Education developed for state-wide use; and (3) develop an aerospace component for the Maryland state Web site to excite students about NASA-related careers. The focus of the second year was developing an online awards component and a plan for following up with students who gain recognition because of their participation.

Accomplishments to Date:

In FY 2004, the Web site was created by the Maryland Business Roundtable and featured four NASA employees. The FY 2005 additions featured two additional employees and the development of a prototype gaming interface, which helped to fulfill the project's objectives of developing a site that attracted first-time visitors and encouraged repeat visitors. It also incorporated information about aerospace careers and addressed the establishment of an awards program. The Goddard features on the Web site were highlighted in the Maryland Business Roundtable Annual Report and recognized at the Roundtable's annual business meeting. Since the Roundtable is made up of CEOs of the largest corporations doing business in Maryland, this continued recognition was significant.

Planned Future Work:

The next steps of the Roundtable's Teen Web effort will include further development of the game interface, including field-testing with student focus groups. The students will be encouraged as an audience to play through the existing game segments to earn points toward an award. An awards program would include an on-center tour of Goddard for high achievers, who would be introduced to the programs available to them. We also plan to expand the game to include other branches of work at Goddard. This would enhance the experience and provide a rich resource for students seeking career information. An interesting possibility would be to enroll a group of interested focus group students in a student internship program, which they learned about because of their experience with the game.

Key Points Summary:

Project's innovative features: This DDF constituted a major effort to incorporate NASA content within a larger State of Maryland effort. It engaged businesses and government agencies and it focused on middle school students—a group NASA has targeted in its educational outreach efforts.

Potential payoff to Goddard/NASA: The payoff to Goddard is directly related to the NASA mission of inspiring the next generation of explorers and encouraging students to pursue careers in career fields important to NASA.

The criteria for success: They include the six criteria established by the NASA HQ Education Office. Programs must (1) include a customer focus, (2) include NASA content, (3) increase the number of students pursing technical careers, (4) offer diversity; (5) offer sustainability; and (6) be evaluated.

Technical risk factors: They include whether a Web site can actually influence middle school students to take courses in Algebra and other higher-level math and science courses during the early years of high school and whether the incorporation of an online gaming format into the awards program will encourage student participation. The Web-based component needs to be directly linked to a systemic approach to career exploration and development. It should include personal contact and counseling, not just passive reliance on a Web site.